

CLAIMS

What Is Claimed Is:

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- In a spectral ellipsometer having a source of multi-wavelength light, an 1. optical system for directing the light, and a detecting optical system for receiving light 2 after contact with a sample surface, the improvement comprising: 3
- an optical element for receiving the multi-wavelength light directed from 4 the optical system and focusing the multiple wavelength light onto a single spot on the 5 6 sample surface.
- The spectral ellipsometer of Claim 1 wherein the optical element is a 1 2. 2 spherical prism.
- The spectral ellipsometer of Claim 1 wherein the optical element is a 3. 1 polarizing prism with at least one curved surface for transmitting the multi-wavelength 2 3 light.
 - In a spectral ellipsometer, which includes a light incidence optical system for achieving spot incidence of polarization light of multi-wavelengths onto a sample surface and a detecting optical system for outputting information concerning the sample surface based on an amount of change in elliptical polarization reflected by the sample surface, the improvement comprising a prism polarizer employed in the light incidence optical system with a curved light-incident surface and a curved light-outgoing surface that is orthogonal with respect to a progressing direction of the respective direction of incident and outgoing light.



l	5.	A method of optically determining the characteristics of a sample
2	surface, comp	rising:
3		providing a multi-wavelength light;
ı		polarizing the multi-wavelength light;
5	·	directing the polarized multi-wavelength light to focus at an oblique
5	angle on a sin	gle point on a sample surface;
7		measuring the reflected polarized light from the sample surface, and
8		determining the characterization from the change in polarization
9	determined in	the measured light.
1	6.	The method of Claim 5, wherein the directing step includes a spherical
2	prism polariz	ation.
1	7.	The method of Claim 6, wherein the polarizing prism has an inciden
2	convey surface	se and an eviting concave surface